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COSTS and RETURNS



**Commercial
Dairy
Farms**

**Northeast and
Midwest**

1964

FARM COSTS STUDIES

This report is part of a continuing nationwide study of costs and returns on commercial farms and ranches by type and size in some of the important farming regions of the United States. The study is conducted under the general supervision of Wylie D. Goodsell, Farm Production Economics Division, Economic Research Service. Objectives, methodology, procedure, and terms are uniform for all areas covered in the study.

The 1964 costs and returns studies have been conducted on the following:

Dairy Farms, Northeast and Midwest
 Corn Belt Farms
 Egg-Producing Farms, New Jersey
 Broiler Farms, Maine, Delmarva, and Georgia
 Cotton Farms
 Tobacco Farms, Coastal Plain, North Carolina
 Tobacco-Livestock Farms, Bluegrass Area, Kentucky
 Wheat Farms, Plains and Pacific Northwest
 Western Livestock Ranches

Summary statistics for all types of farms in the study are presented in a report, revised annually. The latest such report was published in 1964 and is titled: "Farm Costs and Returns, Commercial Farms, by Type, Size, and Location," Agriculture Information Bulletin No. 230, Revised 1964.

Information on the studies can be obtained from Farm Production Economics Division, Economic Research Service, U.S. Department of Agriculture, Washington, D.C. 20250.

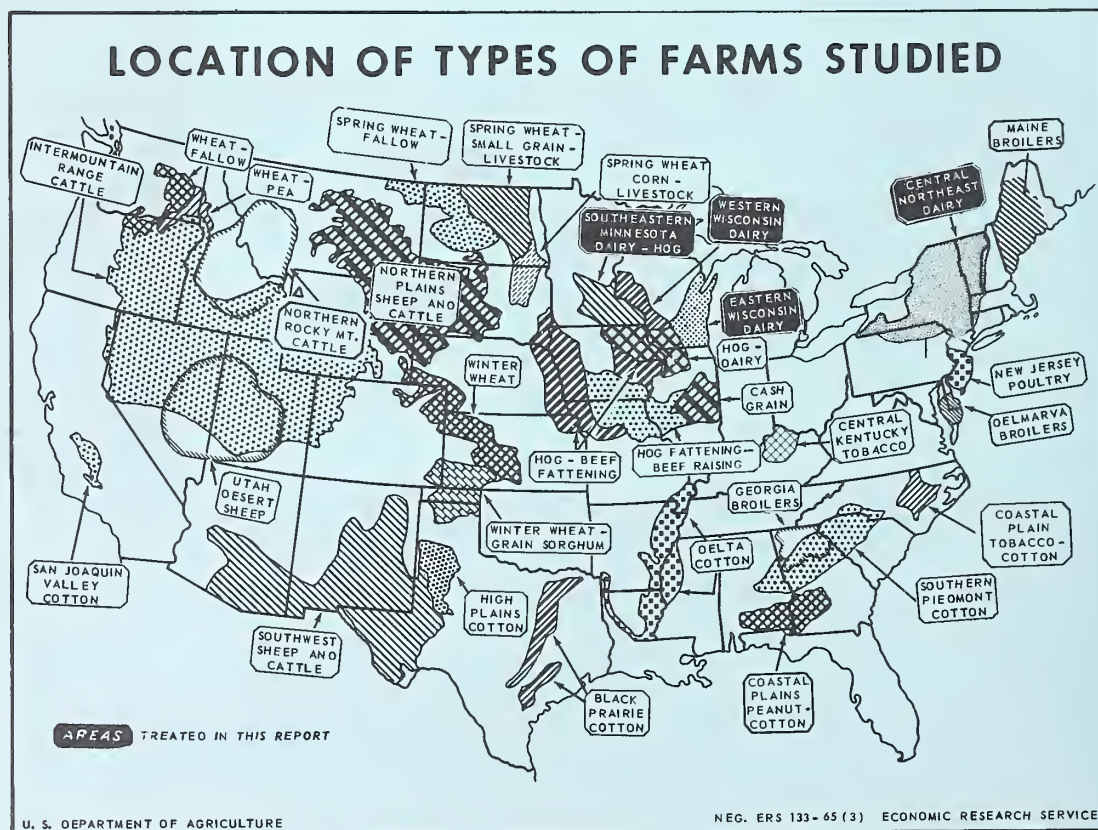


Figure 1

COSTS AND RETURNS COMMERCIAL DAIRY FARMS NORTHEAST AND MIDWEST, 1964

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INTRODUCTION

Net farm incomes in 1964 on typical dairy farms in the Central Northeast and Midwest ranged from 9 percent higher than in 1963 on eastern Wisconsin grade-A dairy farms to 41 percent lower on western Wisconsin grade-B dairy farms (figs. 1 and 2). Milk production increased on all five types of farms, but substantial decreases in both grain and hay production, largely because of drought, were primarily responsible for lower incomes on western Wisconsin and southeastern Minnesota dairy farms (table 1). Prices received in 1964 for products sold were unchanged to 3 percent higher, largely because of higher milk prices. Prices paid for goods and services used in production were about the same as in 1963.

SPECIALIZED DAIRY AREAS

Central Northeast

Net farm income on typical dairy farms in the Central Northeast was \$4,178 per farm in 1964. This was slightly higher than in 1963 because of greater farm production. The average of prices received for products sold was the same in both years. Prices received for fluid milk averaged 1 percent higher in 1964, but this increase was offset by lower prices for cattle, calves, and poultry products. Sales of milk increased 5 percent in 1964 and continued to comprise about 88 percent of total cash receipts (table 2).

Farm production increased more than 2 percent in 1964, primarily because milk production per farm increased more than 5 percent from a year earlier. Offsetting a portion of this increase was a decrease of over 4 percent in total production of hay equivalents (hay and corn silage). Crop yields were 6 percent lower in 1964, largely because hay yields averaged about 9 percent lower than in the previous year.

Total cash expenditures rose more than 2 percent in 1964 because of increased purchases of production items. The average of prices paid

NET FARM INCOME

Commercial Dairy Farms

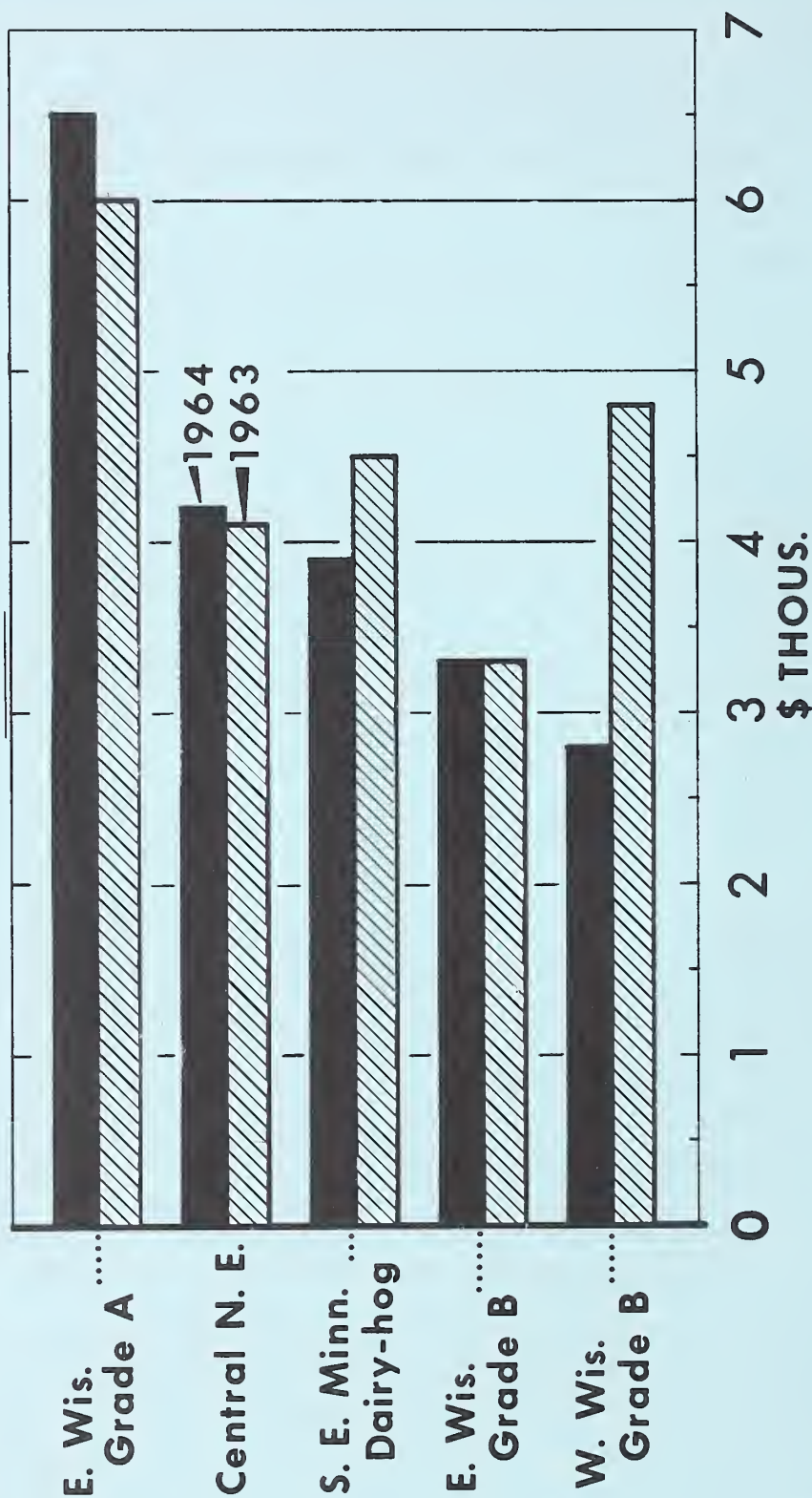


Figure 2

Table 1.- Organization and production, commercial dairy farms, specified locations, 1963 and 1964

Item	Unit	Central Northeast dairy		Eastern Wisconsin dairy				Western Wisconsin dairy, Grade B		Southeastern Minnesota dairy-hog	
		1963	1964 1/	1963	1964 1/	1963	1964 1/	1963	1964 1/	1963	1964 1/
Land in farm.....	Acre	239	243	175	180	146	149	188	192	175	179
Cropland harvested.....	do.	88	90	119	122	88	90	90	92	107	109
Crops harvested:											
Corn for grain.....	do.	---	---	21.0	24.6	12.3	14.6	19.9	13.4	39.5	37.2
Corn for silage.....	do.	12.3	12.9	20.5	19.0	12.0	11.2	8.0	15.5	7.5	12.7
Small grains.....	do.	13.4	13.1	27.5	27.0	26.0	25.5	22.2	22.4	27.4	26.4
Hay.....	do.	62.3	63.5	43.0	44.7	36.0	37.4	39.3	40.4	32.9	33.1
Crop yields per harvested acre:											
Corn for grain.....	Bushel	---	---	76.3	80.9	68.4	72.5	70.2	49.8	68.7	56.3
Corn for silage.....	Ton	11.5	11.3	11.3	12.0	10.0	10.6	12.3	6.9	11.3	8.2
Oats.....	Bushel	52.0	54.0	61.7	56.8	57.0	52.4	53.0	45.0	52.4	48.7
Hay.....	Ton	1.9	1.7	2.6	2.7	2.1	2.2	3.0	1.9	3.0	2.6
Cattle on farm, Jan. 1:											
All cattle.....	Number	47.3	48.0	54.9	56.1	34.6	35.0	44.0	44.7	38.0	38.4
Cows and heifers, 2 years old and over.....	do.	32.2	33.0	32.0	33.3	21.6	22.1	23.8	24.8	21.9	22.2
Milk production per cow.....	Pound	8,970	9,230	10,230	10,540	8,710	8,980	8,380	8,660	8,450	9,060
Total farm capital, Jan. 1.....	Dollar	43,600	45,500	67,590	71,990	44,740	48,190	37,450	38,770	55,240	57,600
Land and buildings.....	do.	23,400	25,100	38,320	41,580	28,320	30,900	21,750	22,120	36,740	39,490
Machinery and equipment.....	do.	7,900	8,200	12,330	12,820	6,370	6,480	4,240	4,390	7,360	7,550
Livestock.....	do.	9,000	9,200	11,900	11,400	6,380	6,020	7,680	7,280	7,380	6,620
Crops.....	do.	3,300	3,000	5,040	6,190	3,670	4,790	3,780	4,980	3,760	3,940
Total labor used.....	Hour	4,590	4,610	4,630	4,750	3,810	3,870	4,320	4,390	4,200	4,240
Hired.....	do.	830	810	510	480	100	90	300	290	340	330

1/ Preliminary.

Table 2.- Receipts and expenditures, commercial dairy farms, specified locations, 1963 and 1964

Item	Central Northeast dairy		Eastern Wisconsin dairy		Wisconsin dairy, Grade B		Southeastern Minnesota dairy-hog	
	Grade A		Grade B		Grade B			
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
	1963	1964 1/	1963	1964 1/	1963	1964 1/	1963	1964 1/
Total cash receipts.....	13,252	14,022	14,070	15,587	7,870	8,187	8,783	10,562
Dairy products.....	11,642	12,407	10,345	11,476	5,382	5,776	5,655	6,235
Cattle and calves.....	1,365	1,356	2,099	1,958	1,154	1,068	1,484	1,218
Hogs.....	---	---	877	905	674	687	724	1,434
Poultry and eggs.....	179	192	---	---	240	223	208	388
Crops.....	---	---	271	671	165	130	385	479
Other, including Government payments.....	66	67	478	577	255	303	327	504
Value of perquisites.....	961	1,005	1,107	1,150	1,026	1,068	847	799
Change in inventory of crops and livestock.....	338	-90	717	169	631	518	827	47
Gross farm income.....	14,551	14,937	15,894	16,906	9,527	9,773	10,457	11,104
Total cash expenditures.....	10,755	11,028	10,590	11,041	6,241	6,396	5,678	7,393
Feed purchased.....	3,932	4,017	1,260	1,299	875	832	739	911
Livestock expense.....	609	627	706	739	491	512	435	487
Fertilizer and lime.....	444	461	429	507	265	312	297	372
Other crop expense.....	370	376	656	670	524	530	502	520
Machinery.....	3,025	3,088	4,035	4,179	2,287	2,344	2,104	2,787
Farm buildings and fences.....	558	580	1,401	1,482	616	634	454	873
Labor hired.....	778	786	529	508	99	100	294	339
Taxes.....	783	833	1,231	1,303	808	850	648	848
Other.....	256	260	343	354	276	282	205	256
Inventory adjustment, machinery and buildings..	-305	-269	-701	-676	29	45	-52	-193
Total operating expenses.....	10,450	10,759	9,889	10,365	6,270	6,441	5,626	7,200

1/ Preliminary.

for these items was unchanged from 1963. Total feed expense, which generally comprises more than one-third of total cash expenditures, was only slightly higher in 1964, as feed prices eased lower and feeding rates per hundredweight of milk produced also declined slightly. Operating expense per unit of production remained unchanged from 1963, but was still 9 percent higher than in 1957-59.

The value of farm capital on Central Northeast dairy farms was a record high of \$45,500 per farm on Jan. 1, 1964, an increase of \$1,900 from a year earlier. The value of land and buildings rose \$1,700, primarily because of a 5-percent increase in the estimated per acre market value of land. Total value of crops held in inventory declined 9 percent from Jan. 1, 1963, but both livestock and machinery and equipment increased in value.

Eastern Wisconsin, Grade-A

Net farm incomes in 1964 on grade-A dairy farms in eastern Wisconsin averaged \$6,541 per farm, nearly 9 percent higher than in 1963 and 23 percent above the 1957-59 average. The increase from 1963 resulted largely from an increase of around \$1,130 in milk receipts. Milk sales increased nearly 7 percent from 1963, and prices received for fluid milk averaged 14 cents per hundredweight higher. Quantities of livestock marketed increased in 1964, but prices received for cattle and calves were lower and, consequently, cash receipts decreased 4 percent. Receipts from crops sold were up \$400 in 1964, mainly because of a five-fold increase in the quantity of corn sold. The index of prices received was up 2 percent.

Farm production rose about 4 percent in 1964, largely because milk production per farm was greater than in 1963.

Higher milk production per cow and increased numbers milked contributed about equally to this rise in total milk production. Production of both grain and hay equivalents was greater in 1964, partly because crop yields averaged about 3 percent higher than a year earlier.

Prices paid for goods and services used in production remained unchanged from the 1963 record high, but total cash expenditures increased more than 4 percent and operating expense per unit of production rose slightly. All major types of expenditures, except for hired labor, were higher in 1964, with machinery expenses increasing most.

The value of farm capital on these dairy farms reached a record high of \$71,990 per farm on Jan. 1, 1964, rising \$4,400 from a year earlier. The value of land and buildings increased \$3,260, of which about 65 percent can be attributed to rising land values. Investment in all other capital items, except in livestock, showed increases from the previous year.

The 9 percent higher net farm income was responsible for an increase in the return to operator and family labor--from 56 cents per hour in 1963 to 61 cents in 1964. The corresponding return in 1957-59 was 69 cents.

Eastern Wisconsin, Grade-B

Net farm incomes on grade-B dairy farms in eastern Wisconsin averaged \$3,332 per farm in 1964, slightly higher than in 1963 (table 3), and about 32 percent above the 1957-59 average. An increase of

Table 3.- Income and related data, commercial dairy farms, specified locations, 1963 and 1964

Item	Central Northeast dairy		Eastern Wisconsin dairy				Wisconsin dairy, Grade B		Southeastern Minnesota dairy-hog	
			Grade A		Grade B					
	1963	1964 1/	1963	1964 1/	1963	1964 1/	1963	1964 1/	1963	1964 1/
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
Net farm income.....	4,101	4,178	6,005	6,541	3,257	3,332	4,831	2,837	4,545	3,904
Charge for capital at current interest rates 2/.....	2,507	2,616	3,718	3,957	2,461	2,650	2,060	2,132	3,038	3,168
Return to operator and family labor.....	1,594	1,562	2,287	2,584	796	682	2,771	705	1,507	736
Return per hour.....	.42	.41	.56	.61	.21	.18	.69	.17	.39	.19
Charge for capital at 4.1 percent interest 3/.....	1,788	1,866	2,771	2,950	1,834	1,976	1,535	1,590	2,265	2,362
Return to operator and family labor.....	2,313	2,312	3,234	3,591	1,423	1,356	3,296	1,247	2,280	1,542
Return per hour.....	.62	.61	.78	.84	.38	.36	.82	.30	.59	.39
	<u>Index numbers (1957-59=100)</u>									
Net farm production.....	123	126	122	127	121	124	128	105	120	109
Total milk production.....	139	146	129	138	124	130	128	136	123	135
Crop yields per acre.....	105	99	106	109	105	107	114	99	115	99
Total cost per unit of production.....	104	105	104	106	106	109	96	119	104	118
Prices received for products sold.....	95	95	98	100	100	100	99	99	99	102
Prices paid, including wages to hired labor....	105	105	110	110	109	110	110	112	107	106

1/ Preliminary. 2/ Represents the current interest rate in effect on Jan. 1, for new loans by the Federal Land Banks in the farmers' respective areas. 3/ Represents the average rate paid by farmers on outstanding debts held by the Federal Land Banks in the United States from 1940 to 1960.

Note: Information presented here is on an owner-operator basis primarily for comparability between types of farms. Net farm income is the return to operator and unpaid members of the family for their labor and management on the farm and return to total capital. No allowance has been made for payment of rent, interest, or mortgage.

more than 5 percent in the quantity of milk sold in 1964, at a slightly higher average price, was primarily responsible for an increase in total cash receipts, and for the slightly higher net farm income. Receipts from cattle, calves, and poultry products dropped in 1964 because of lower prices received. Hog marketings and receipts averaged about the same in both years.

Farm production rose more than 2 percent, largely because milk production increased 5 percent from a year earlier. Grain and roughage production also increased in 1964, as crop yields averaged slightly higher. Oats was the only crop with a lower yield per acre in 1964.

Total cash expenditures were up in 1964, primarily because of increased purchases of goods and services used in production. Crop production costs and machinery expenses increased most. Prices paid for production inputs averaged only slightly higher than in 1963.

The value of farm capital as of Jan. 1, 1964, increased nearly 8 percent from a year earlier to a record high of \$48,190 per farm. Rising market values of land, coupled with an increase in size of farm, accounted for three-fourths of this increase. Only livestock, because of lower prices, decreased in value from Jan. 1, 1963.

Western Wisconsin, Grade-B

Net income per farm in 1964 on grade-B dairy farms in western Wisconsin was an estimated \$2,837, a decrease of about 41 percent from 1963, and the lowest return since 1955. Cash expenses increased slightly more than cash receipts in 1964, but crop yields averaged nearly 30 percent lower than in the

previous year. Despite an increase of 9 percent in milk receipts, total cash receipts were only slightly higher in 1964, primarily because of decreased income from crops sold. Cash receipts from livestock sales also declined, mainly because of lower cattle and calf prices.

Farm production was 18 percent lower in 1964, even though milk production per cow and per farm increased substantially. Widespread drought in this area in 1964 resulted in crop yields that were 19 percent below the 1957-59 average and the lowest since at least 1954. Consequently, and despite increases in the acreages of oats and hay harvested, grain and roughage production were 40 and 25 percent lower, respectively, than in 1963. Partial evidence of the severity of the drought lies in the fact that 54 percent of the corn acreage in 1964 was harvested for silage, compared with 29 percent in 1963.

Total cash expenditures were up about 3 percent in 1964, because of increased purchases of production inputs and higher prices paid for them. Crop production expenses and taxes increased the most, both about 8 percent. Operating expense per unit of production was a record high and 23 percent above 1963.

The value of farm capital on these grade-B farms was a record high of \$38,770 per farm on Jan. 1, 1964, an increase of \$1,320 from a year earlier. An increase in the value of crops held in inventory accounted for most of this rise.

The substantial drop in net farm income in 1964 lowered the return to farm operator and family labor and management to 17 cents per hour, compared with 69 cents in 1963 and 52 cents in 1957-59. The 1964 return per hour was the lowest since 1940.

Southeastern Minnesota, Dairy-Hog

Net farm incomes in 1964 on dairy-hog farms in southeastern Minnesota averaged \$3,904 per farm, a decrease of 14 percent from 1963 and about the level of 1957-59. Cash expenditures increased less than 2 percent in 1964, but total cash receipts declined 3 percent and crop yields averaged 14 percent lower than in 1963. Receipts from the sales of milk increased about \$665 per farm in 1964, primarily because of increased quantities sold. However, this was more than offset by a sharp decrease in receipts from the sales of corn. Income from livestock sales also declined, as a result of both reduced marketings and lower prices received. Cattle and calf prices decreased around \$1.30 and \$1.60 per hundredweight, respectively, and hog prices were slightly lower.

Farm production was 9 percent lower in 1964, even though production per cow increased a record 614 pounds and milk production per farm rose over 9 percent from 1963. Because of the drought that plagued much of this area in 1964, crop yields dropped sharply from the

record highs in 1963, and were about the same as in 1957-59. Consequently, grain and roughage production were 20 and 7 percent lower, respectively, than in 1963.

Total cash expenditures were higher in 1964 as a result of increased purchases of items used in production. Prices paid for inputs averaged slightly lower than in 1963. However, the substantial decrease in net farm production caused operating expense per unit of production to rise nearly 14 percent, setting a record high for these farms.

The value of farm capital on these dairy-hog farms reached a record high of \$57,600 per farm on Jan. 1, 1964, a net increase of \$2,360 from a year earlier. Increased value of land and buildings accounted for about 90 percent of this increase.

The combined effect of a noticeably lower net farm income, a slightly greater labor input, and a higher capital charge in 1964 resulted in an average return of 19 cents per hour to farm operator and family labor. This compared with returns of 39 cents in 1963 and 47 cents in 1957-59.

AREAS IN AGGREGATE¹

In the aggregate, dairy farms in these two major milk production regions continued to increase in size in 1964 (2 percent), as smaller

producers ceased operating and their farms either were absorbed by the remaining producers or were retired from agricultural production. An

¹To describe the organizational and financial changes from year to year on these dairy farms as a group, a system of weights was constructed, using 1959 U.S. Census of Agriculture data. The weights were based on the number of commercial dairy farms in each of the areas represented by each of the five typical dairy farms. These typical commercial dairy farms fall into census economic classes I-IV, which define a minimum total value of farm product sales of \$5,000 per farm. The upper limit on the value of sales per farm is not specified. Economic classes I-IV include about 76 percent of all commercial dairy farms in each of the five areas represented. The number of dairy farms has decreased since 1959, but it is assumed that the decrease has been proportional, exerting little effect on the weights assigned. The weights are: Central Northeast, 39.0; eastern Wisconsin grade-B, 19.0; southeastern Minnesota dairy-hog, 17.0; western Wisconsin grade-B, 16.0; and eastern Wisconsin grade-A, 9.0.

average of 96 acres of cropland was harvested per farm in 1964, a 2-acre increase from 1963. The acreage harvested for grain decreased 3 percent, primarily because a higher proportion of the corn in 1964 was harvested for silage. As a result, acres harvested for forage increased more than 5 percent. Total animal units (A.U.) per farm increased only slightly from 1963, and cropland acres harvested per A.U. edged upward to about 2.38.

Net farm income declined from \$4,309 per farm in 1963 to \$3,968 in 1964 (table 4), and was only 3 percent higher than in 1957-59. Net cash income was up about 9 percent in 1964, but crop yields were down and the production of both grain and roughage dropped considerably. Prices received for products sold averaged the same in both years, but the ratio between prices received and prices paid eased from 92 to 91. The weighted average price received in 1964 for both fluid and manufacturing milk reversed its recent downward trend and rose about 2 percent. Beef cattle and calf prices dropped about \$1.10 and \$1.80 per hundredweight, respectively. Hog and poultry product prices were slightly lower, but crop prices were higher. Total cash receipts increased more than 4 percent in 1964, largely because the quantity of milk sold increased more than 6 percent.

Farm production decreased about 3 percent in 1964, but still was 19 percent greater than in 1957-59. A slight increase in the number of cows milked in 1964 and a gain of 320 pounds in milk production per cow resulted in an increase of over 6 percent in total milk production per farm. Milk production in 1964 was 40 percent greater than in 1957-59. Crop yields, however, averaged

about 8 percent lower in 1964, primarily because of a drought in western Wisconsin and southeastern Minnesota during much of the growing season. Yields of corn, the principal grain crop, averaged nearly 11 percent lower in 1964, contributing largely to a decrease of about 12 percent in total grain production. Despite increased acreages of hay and corn silage, lower yields of both resulted in a decrease of 6 percent in roughage production.

Total cash expenditures continued to rise in 1964, primarily because of increases in the quantities of inputs purchased. Prices paid for goods and services used in production averaged slightly higher in 1964. Expenditures for major items--feed, farm machinery, buildings, and taxes--were about 2 percent higher. Operating expense per unit of production rose nearly 7 percent, largely because of the substantial decrease in grain production. Production efficiency (production per unit of input, measured with production and cost at 1957-59 prices) declined about 6 percent from the record high in 1963.

The value of farm capital on Jan. 1, 1964, averaged \$49,320 per farm, compared with \$46,920 in the previous year and \$37,470 in 1957-59. Rising market values of land accounted for 75 percent of the increase from 1963 in total farm capital.

Lower net farm income accounted for nearly 70 percent of the decrease in the return to farm operator and family labor, from 44 cents per hour in 1963 to 31 cents in 1964. The 1964 return per hour was 21 cents below the 1957-59 average, and was the lowest since at least 1957.

Table 4.- Organization, production, income, and related data, five commercial dairy farms, in the aggregate, 1963 and 1964

Item	Unit	1963	1964 ^{1/}	Item	Unit	1963	1964 ^{1/}
Land in farm.....	Acre	197	201	Total cash receipts.....	Dollar	11,144	11,611
Cropland harvested.....	do.	94	96	Value of perquisites.....	do.	937	968
Corn for grain.....	do.	14.1	13.4	Change in inventory of crops and livestock.....	do.	490	-91
Corn for silage.....	do.	11.5	13.5	Gross farm income.....	do.	12,571	12,488
Small grains.....	do.	20.8	20.4	Total cash expenditures.....	do.	8,488	8,713
Hay.....	do.	47.0	48.1	Inventory adjustment, machinery and buildings.....	do.	-226	-193
Crop yields per harvested acre:				Total operating expenses.....	do.	8,262	8,520
Corn for grain.....	Bushel	69.8	62.4	Net cash farm income.....	do.	2,656	2,898
Corn for silage.....	Ton	11.2	10.0	Net farm income.....	do.	4,309	3,968
Oats.....	Bushel	54.6	51.2	Charge for capital ^{2/}	do.	2,624	2,757
Hay.....	Ton	2.27	2.00	Return to operator and family labor.....	do.	1,685	1,211
All cattle on farm, Jan. 1.....	Number	43.5	44.2	Return per hour.....	do.	.44	.31
Cows and heifers, 2 years old and over.....	do.	27.1	27.8	Index numbers (1957-59=100):			
Average number of cows milked.....	do.	25.7	26.4	Net farm production.....	---	123	119
Milk production per cow.....	Pound	8,910	9,230	Total milk production.....	---	132	140
Total farm capital, Jan. 1.....	Dollar	46,920	49,320	Crop yields per acre.....	---	108	99
Land and buildings.....	do.	27,630	29,590	Total cost per unit of production.....	---	103	110
Machinery and equipment.....	do.	7,330	7,570	Prices received for products sold.....	---	98	98
Livestock.....	do.	8,280	8,060	Prices paid, including wages to hired labor.....	---	107	108
Crops.....	do.	3,680	4,100				
Total labor used.....	Hour	4,340	4,390				
Hired.....	do.	500	480				

^{1/} Preliminary. ^{2/} Represents the current interest rate in effect on Jan. 1, for new loans by the Federal Land Banks in the farmers' respective area.